

EXHIBIT R

HIGHLY CONFIDENTIAL
SUBJECT TO PROTECTIVE ORDER

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

UNITED STATES OF AMERICA, et al.,

Plaintiffs,

v.

AMERICAN AIRLINES GROUP INC. and
JETBLUE AIRWAYS CORPORATION,

Defendants.

Case Action No. 1:21-cv-11558-LTS

HIGHLY CONFIDENTIAL

EXPERT REPORT OF DARIN N. LEE, PH.D.

SUBJECT TO PROTECTIVE ORDER

**HIGHLY CONFIDENTIAL
SUBJECT TO PROTECTIVE ORDER**

(2008) found that fares on a route declined by as much as 34.4% following entry by Southwest and further showed that *even the threat of Southwest entry*—measured by when Southwest served both endpoints of a route without serving the route—reduced fares of the incumbent carriers on a route.⁵⁶ Finally, using data for the year ending 2008-Q2, Brueckner, Lee, and Singer (2013) built on previous work by Morrison (2001) and Goolsbee & Syverson (2008), controlling for both adjacent and potential competition effects and estimated the “Southwest Effect” at 26.8%.⁵⁷

26. Notwithstanding the carrier’s success and history of driving down fares and taking share from the higher-cost GNCs—in some instances directly as a result of DOJ’s actions⁵⁸—Plaintiffs now weaponize Southwest’s success against GNCs by asserting that the airline industry “is dominated by four large airlines: three ‘legacy’ airlines—American, Delta Air Lines, and United Airlines—and Southwest Airlines” and observing that these four carriers “control over 80 percent of domestic air travel.”⁵⁹

Given Southwest’s long and continuing tradition of being a maverick, Plaintiffs’ view

⁵⁶ See Austan Goolsbee and Chad Syverson, “How Do Incumbents Respond to the Threat of Entry? Evidence from Major Airlines,” *Quarterly Journal of Economics*, 123, 2008, pp. 1611–1633.

⁵⁷ See Jan Brueckner, Darin Lee, and Ethan Singer, “Airline Competition and Domestic U.S. Airfares: A Comprehensive Reappraisal,” *Economics of Transportation*, vol. 2 (1), 2013, pp. 1-17 [hereinafter Brueckner, Lee and Singer (2013)].

⁵⁸ See, e.g., “Relief in Airline Merger Cases: The American/US Airways Settlement,” Note to Directorate For Financial And Enterprise Affairs Competition Committee, Daf/Comp/Wd (2014) 48, *U.S. DOJ*, June 16, 2014, <https://www.justice.gov/sites/default/files/atr/legacy/2015/02/26/311224.pdf> (“The slot divestitures at DCA and LGA have been completed. Following a competitive bidding process conducted by American, the slots have been transferred to LCCs approved by the United States. At LGA, Southwest and Virgin America obtained bundles of 12 slots each... At DCA, the divestitures will result in additional service from three LCCs. Southwest obtained 56 additional slots, JetBlue obtained a bundle of 24 additional slots, and Virgin America obtained 8 slots.”).

⁵⁹ See Complaint, ¶ 1 (“Today, [the U.S. airline industry] is dominated by four large airlines: three ‘legacy’ airlines—American, Delta Air Lines, and United Airlines—and Southwest Airlines. American is the largest of these airlines. Together, the four control over 80 percent of domestic air travel.”).

HIGHLY CONFIDENTIAL
SUBJECT TO PROTECTIVE ORDER

that Southwest should now be considered—for the purposes of analyzing the competitive state of the industry—as equivalent to one of the GNCs, is wholly unfounded. For example, extending and updating the data used in the Brueckner, Lee, and Singer (2013) study confirms that Southwest continues to exert downward pressure on fares. Specifically, when the fare effects model used in Brueckner, Lee, and Singer (2013) is re-estimated using data through the full year ending 2016-Q2, Southwest’s presence on a route continues to reduce average fares by 21.2%.⁶⁰ I have since updated this analysis using data from 2019.⁶¹ As summarized in Exhibit 6 below (regression results are presented in Exhibit 53 in Appendix D.A), the “Southwest Effect” is still very much alive and well, even if somewhat smaller than in 2016.⁶² The fact that the magnitude of the “Southwest Effect” has diminished over time (*i.e.*, declining from roughly 21% in 2016 versus 17% in 2019) reflects—in large part—the success of other carriers with *even lower* costs than Southwest rapidly expanding and also putting

⁶⁰ In addition to updating the time period of analysis, this extension (i) disaggregated the effects of lower cost carriers other than Southwest to present separate fare effects for each carrier (ii) estimated fare effects for Alaska presence separately, instead of including Alaska as a legacy network carrier; (iii) estimated a version of the regression where the dependent variable was the natural log of GNC fares, instead of all fares, and (iv) expanded the geographic scope to include Alaska and Hawaii. See “Industry Review: Allocating Capital to Benefit Customers, Employees and Investors,” *Airlines for America*, Updated June 10, 2022, p. 49, <https://www.airlines.org/wp-content/uploads/2022/05/A4A-Industry-Review-6.pdf>. As is frequently done, I have transformed the fare variables in the regression analyses into natural logarithms so that I can interpret the estimated coefficients as percentage effects on fares. It should be noted that the estimated coefficient on a dummy variable in a log regression differs from the percentage by an adjustment factor, which can be non-trivial for large estimated coefficients. However, to facilitate a simple discussion, this technical discrepancy is ignored in the discussion of results presented here.

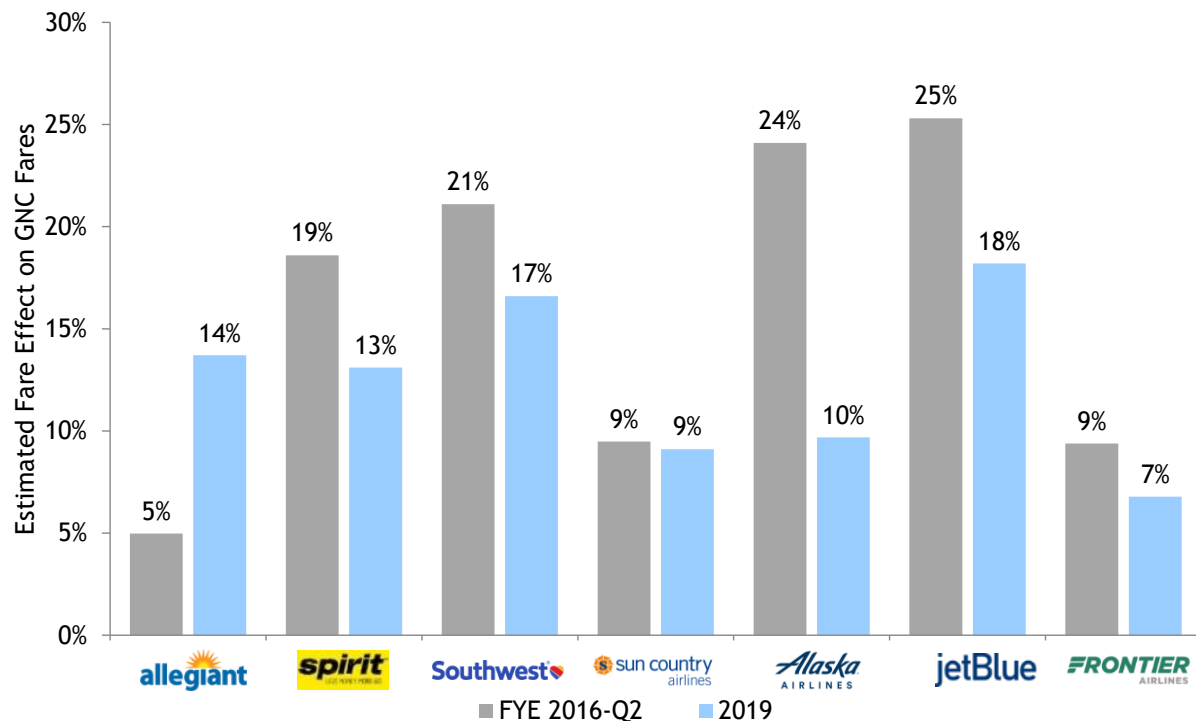
⁶¹ Although the U.S. DOT’s DB1B database from 2020 and 2021 is available, travel patterns in those two years were severely distorted by the impact of the COVID-19 pandemic. Hence, 2019 represents the most recent “normal” year of U.S. fare and passenger data.

⁶² Exhibit 6 displays Southwest and other lower costs carriers’ effect on GNC fares. The regression results shown in Exhibit 53 in Appendix D.A also display the estimated effect on all fares.

**HIGHLY CONFIDENTIAL
SUBJECT TO PROTECTIVE ORDER**

downward pressure on airfares,⁶³ as well as Southwest's own success at competing for business travelers who tend to purchase more flexible (but more expensive) fares. Although once thought of as primarily a leisure carrier, Southwest has estimated that business passengers now comprise between 35% and 40% of their traffic.⁶⁴

Exhibit 6: Estimated Fare Effects of Lower Cost Carrier Nonstop Service on GNC Fares, From Update to Brueckner, Lee, Singer (2013) Using Data From FYE 2016-Q2 and 2019



Notes: Estimated nonstop fare effects of lower cost carriers on GNC fares. Based on an update and extension of Brueckner, Lee, Singer (2013).

27. Exhibit 6 also highlights another important fact about today's airline industry: multiple lower cost carriers (*e.g.*, Alaska, JetBlue, Spirit, Frontier, Allegiant, and Sun Country), utilizing a variety of business models—*not just Southwest*—put downward pressure on

⁶³ See, *e.g.*, Exhibit 11 above and Exhibit 13 below.

⁶⁴ See "Transcript: The Path Forward: The Airline Industry with Southwest Airlines CEO Gary Kelly," *The Washington Post*, March 15, 2021, <https://www.washingtonpost.com/washington-post-live/2021/03/15/transcript-path-forward-airline-industry-with-southwest-airlines-ceo-gary-kelly/> (Gary Kelly: "In normal times we'd be looking at 35 to 40 percent of our demand traveling for business.").

**HIGHLY CONFIDENTIAL
SUBJECT TO PROTECTIVE ORDER**

the same period (1.0%).¹⁴⁹ Simply put, while Dr. Town would have one believe that “merger-driven increases in aggregate concentration facilitated industrywide capacity reductions”¹⁵⁰ and that “[t]he airline industry contains many of the[] features making it ripe for coordinated (or parallel accommodating) conduct that *can lead to consumer harm*,”¹⁵¹ his report is devoid of any data or analysis indicating that consumer harm has actually occurred. Instead, by focusing exclusively on measures of aggregate capacity (e.g., legacy network carrier ASMs across all domestic routes) and ignoring other key measures of the industry’s performance, including the prices paid by consumers to travel by air—which reached an all-time low in 2019¹⁵²—and the diversity of service options available both across and within airlines, Dr. Town overlooks the simple fact that these far more relevant measures on the industry’s performance show that consumers have been the beneficiaries of dynamic and robust competition.

60. To be sure, Dr. Town’s analysis is stunningly devoid of any critical analysis of the extraordinary impact the COVID-19 pandemic has had on the U.S. airline industry. To date, the pandemic has had a more severe impact on airline demand than all previous

¹⁴⁹ Sources: “U.S. Census Bureau: Historical Population Estimates July 1, 1900 to July 1, 1999,” *Census Bureau*, April 11, 2000, <https://www2.census.gov/programs-surveys/popest/tables/1900-1980/national/totals/popclockest.txt>; “Annual Estimates of the Resident Population for the United States, Regions, States, the District of Columbia, and Puerto Rico: April 1, 2010 to July 1, 2019; April 1, 2020; and July 1, 2020,” *Census Bureau*, <https://www.census.gov/programs-surveys/popest/technical-documentation/research/evaluation-estimates/2020-evaluation-estimates.html>. National Population Totals. Compound annual growth for population estimates in July 1978 and July 2019.

¹⁵⁰ See Town Report, ¶ 23.

¹⁵¹ See *id.*, ¶ 41 (emphasis added).

¹⁵² See “Annual and Fourth-Quarter 2019 Air Fare Data,” *U.S. Bureau of Transportation Statistics*, April 22, 2020, <https://www.bts.gov/newsroom/annual-and-fourth-quarter-2019-air-fare-data> (“[T]he 2019 average domestic itinerary air fare of \$355 was the lowest inflation-adjusted annual fare since the Bureau of Transportation Statistics began collecting such records in 1995.”)

HIGHLY CONFIDENTIAL
SUBJECT TO PROTECTIVE ORDER

exogenous demand shocks in aviation history *combined*.¹⁵³ Indeed, within a week of the virus's onset in the United States in March 2020, U.S. passenger demand fell to *less than 5%* of the previous year's levels and lingered at severely low levels for months.¹⁵⁴ Finally, more than two years after the start of the pandemic, leisure travel has fully rebounded,¹⁵⁵ while the demand by passengers traveling for business remains below pre-pandemic levels.¹⁵⁶

61. As U.S. airlines weathered the COVID-19 pandemic, they were forced to substantially adjust their schedules and cancel flights that otherwise would have flown virtually empty—and even after doing so, their load factors (*i.e.*, available seating capacity filled with passengers) on planes that operated during this period remained significantly depressed for months.¹⁵⁷ The pandemic-induced demand reduction was so severe that, despite receiving federal financial assistance in the form of payroll support and despite

¹⁵³ In the United States, when compared to the level of passengers for the calendar month in the year prior to the negative shock, the impact of the COVID-19 pandemic on industry-wide passengers through December 2021 (835 million passengers) exceeds the combined impact from 9/11, SARS, H1N1 and the Great Recession (379 million passengers) by more than two times. *Source*: U.S. DOT T-100 database.

¹⁵⁴ By comparison, the next largest drop in air travel demand occurred in September 2001 after the 9/11 terrorist attacks, where U.S. air travel demand fell to 66% of the previous year's levels, bouncing back to around 90% within a matter of six months. Accordingly, in its worst month, the demand shock caused by 9/11 (the largest negative shock the industry had previously ever experienced) was less than one third the size of the initial shock caused by the COVID-19 pandemic, and still paled in comparison to COVID-19's impact a year into the pandemic. *Source*: U.S. DOT T-100 database.

¹⁵⁵ *See, e.g.*, “For the First Time, Leisure-Travel Air Sales Top Pre-Pandemic Levels,” *Travel Weekly*, April 27, 2022, <https://www.travelweekly.com/Travel-News/Airline-News/leisure-air-sales-top-pre-pandemic-levels> (“For the week ending April 24, leisure-focused U.S. travel agencies sold 1.1% more airline tickets than they did during the same week in 2019, according to ARC data.”).

¹⁵⁶ *See, e.g.*, “Impact of COVID-19: Data Updates,” *Airlines for America*, July 6, 2022, p. 21 <https://www.airlines.org/dataset/impact-of-covid19-data-updates/> (“Growth in ‘Corporate’ ticket sales has plateaued over the past few months: Levels remain approximately substantially below 2019”).

¹⁵⁷ In April 2020, load factor at the industry-wide level was 14.1% climbing to 37.5% in May 2020. *Source*: U.S. DOT T-100 database. Between June and December 2020, the industry's load factor averaged 51.9%. *Id.*